

COPY

Patent

REAL-TIME IN-LINE TESTING OF SEMICONDUCTOR WAFERSABSTRACT

1 An apparatus and method for the real-time, in-line testing of
2 semiconductor wafers during the manufacturing process. In one
3 embodiment the apparatus includes a probe assembly within a
4 semiconductor wafer processing line. As each wafer passes adjacent
5 the probe assembly, a source of modulated light, within the probe
6 assembly, having a predetermined wavelength and frequency of
7 modulation, impinges upon the wafer. A sensor in the probe
8 assembly measures the surface photovoltage induced by the modulated
9 light. A computer then uses the induced surface photovoltage to
10 determine various electrical characteristics of the wafer.